REMARKS

Claims 1 and 3-13 are pending in the application and stand rejected. Reconsideration and allowance of Claims 1 and 3-13 in view of the following remarks is respectfully requested.

The Rejection of Claims 1 and 3-13 Under 35 U.S.C. § 112, Second Paragraph

Claims 1 and 3-13 stand rejected under 35 U.S.C. § 112, second paragraph, as indefinite.

The Examiner states that it is unclear whether the fibers have been treated with a bleaching agent prior to, during, or after crosslinking. Applicants believe that the language of independent Claims 1, 5, and 10 is definite and makes clear that polyacrylic acid crosslinked fibers are treated with a bleaching agent (i.e., the fibers are treated with a bleaching agent after crosslinking). Claims 1 and 10 recite "polyacrylic acid crosslinked cellulosic fibers treated with a bleaching agent;" and Claim 5 recites "spraying a bleaching agent into an airstream containing polyacrylic acid crosslinked fiber." Applicants submit that it is clear from the claim language that polyacrylic acid crosslinked cellulosic fibers are treated with a bleaching agent, which means that bleaching takes place only after the fibers have been crosslinked. Applicants note that this meaning is consistent with the specification and with Claim 5, directed to the method for making bleached polyacrylic acid crosslinked fibers, which recites that a bleaching agent is sprayed into an airstream containing the crosslinked fibers. Should the Examiner maintain the rejection, applicants respectfully request that the Examiner make explicit his concerns regarding the claim language.

Claims 1, 5, and 10 recite that "the Whiteness Index of the fibers treated with the bleaching agent increases from a first value determined initially after treatment with the bleaching agent to a second value determined up to 14 days after treatment with the bleaching agent." The Examiner states that it is not clear when the initial determination is made. Applicants believe that claim language is clear: the first Whiteness Index value is "determined

LAW OFFICES OF
CHRISTENSEN O'CONNOR JOHNSON KINDNESS PLLC
1420 Fifth Avenue
Suite 2800
Seattle, Washington 98101
206.682.8100

initially after treatment with the bleaching agent." At page 11, lines 11-12, and referring to Table 2, on page 12, the specification states that values for "Whiteness Index (WI) are provided as initial values, values after one day, and values after 14 days." Table 2 sets forth three time points for WI value determination after bleaching agent treatment: Day 0 (initial); Day 1, and Day 14. At page 13, lines 1-19, the data summarized in Table 2 is discussed and makes clear that the initial value is determined on Day 0, the day of and after the bleaching agent is applied to the fibers. Applicants submit that it is clear that the first WI value determined initially after treatment means that the first value is determined on the day the fibers are treated (Day 0) and only after treatment with the bleaching agent.

The Examiner also appears concerned with possible additional intervening steps and the length of the "bleaching step." Applicants respectfully submit that possible intervening steps are irrelevant to the claimed invention and need not be specified even if such steps were to be undertaken. Similarly, the claims do not and need not define a "bleaching step" having a beginning and an end. The claims as written make clear that a bleaching agent is applied to crosslinked fibers and the Whiteness Index increases from a first initially determined value to a second value determined up to 14 days after treatment with the bleaching agent. Applicants believe that the claims define their invention sufficient for the purposes of Section 112 and do not believe that Section 112 requires more.

The Rejection of Claims 1, 3, and 10-13 Under 35 U.S.C. §§ 102(b)/103(a)

Claims 1, 3, and 10-13 stand rejected under 35 U.S.C. § 102(b) as being anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious in view of U.S. Patent No. 5,549,791, issued to Herron et al. Withdrawal of the rejection is requested for the following reasons.

Claims 1 and 10 are the independent claims. Claim 3 depends from Claim 1 and Claims 12 and 13 depend from Claim 10. Each of Claims 1 and 10 recites that the bleached

LAW OFFICES OF
CHRISTENSEN O'CONNOR JOHNSON KINDNESS PLLC
1420 Fifth Avenue
Suite 2800
Seattle, Washington 98101
206.682.8100

polyacrylic acid crosslinked fibers have a Whiteness Index that increases from a first value determined initially after treatment with the bleaching agent to a second value determined up to 14 days after treatment. The cited reference does not describe a bleached polyacrylic acid crosslinked fiber having a Whiteness Index that increases from an initial value after treatment to a second value determined up to 14 days after treatment with a bleaching agent.

Because the cited reference fails to exactly describe the claimed invention, either explicitly or inherently, the reference is not anticipatory. Withdrawal of the Section 102 rejection is respectfully requested.

Furthermore, the cited reference fails to teach, suggest, or otherwise render obvious the claimed invention.

The Examiner correctly points out that Herron teaches polyacrylic acid crosslinked fibers and that these fibers are brighter than those crosslinked with alpha hydroxy acids. Applicants submit that this teaching acknowledges the relative brightness of polyacrylic acid crosslinked fibers but provides no motivation to further brightened polyacrylic acid crosslinked fibers.

In contrast, the claimed invention addresses the problem of polyacrylic acid crosslinked fiber whiteness and solves that problem by increasing the whiteness of polyacrylic acid crosslinked fibers by treating the polyacrylic acid crosslinked fibers with a bleaching agent. The problem solved by the present invention is neither recognized nor addressed by the teachings of the cited reference. At Column 4, lines 14-17, the Herron reference states an object of the invention is to provide individualized, crosslinked fibers that exhibit a higher level of brightness relative to prior known crosslinked fibers. This is done by crosslinking with polyacrylic acid. At Column 5, lines 58-61, in reference to polyacrylic acid, the reference states that these polymers are preferred for their ability to crosslink fibers and their non-negative effect on cellulose

LAW OFFICES OF
CHRISTENSEN O'CONNOR JOHNSON KINDNESS PLLC
1420 Fifth Avenue
Suite 2800
Seattle, Washington 98101
206.682.8100

brightness. The Herron reference does not teach, suggest, or provide any motivation to bleach polyacrylic acid crosslinked fibers.

The Examiner states that the cited reference discloses that fibers used in that invention may be partially or completely bleached and that bleached fibers are preferred for their superior brightness. Again, applicants agree with the Examiner's understanding of the cited reference. The reference states that "it may be desirable to utilize bleached pulp for its superior brightness and consumer appeal" (see Column 5, lines 33-35) as an "optimum fiber source" (see Column 5, line 28) for making polyacrylic acid crosslinked fibers. The reference makes clear that bleaching is useful for brightening pulp prior to crosslinking to improve the ultimate brightness of the product crosslinked fibers. This teaching relates not at all to post-crosslinking bleaching treatments and is simply an acknowledgment that the brighter the starting pulp, the brighter the product crosslinked pulp. The claimed invention does not relate in any way to polyacrylic acid crosslinked fibers prepared from bleached pulp. Rather, the claimed invention relates to polyacrylic acid crosslinked fibers that are bleached post-crosslinking.

The Examiner also states that post-crosslinking bleaching steps are known. Applicants again agree. However, applicants do not agree that the cited reference teaches, suggests, or provides any motivation to bleach polyacrylic acid crosslinked fibers. In support of the position that the cited reference teaches or suggests post-crosslinking bleaching of polyacrylic acid crosslinked fibers, the Examiner cites a single sentence at Column 13, lines 14-16: "Post-crosslinking treatment of fibers such as the degree of bleaching and the practice of post-crosslinking bleaching steps have been found to affect WRV."

Applicants submit that this single sentence fails to provide a teaching, a suggestion, or any motivation to make bleached polyacrylic acid crosslinked fibers.

LAW OFFICES OF
CHRISTENSEN O'CONNOR JOHNSON KINDNESS PLLC
1420 Fifth Avenue
Suite 2800
Seattle, Washington 98101
206.682.8100

First, as noted above, the entire teaching of the reference is directed to use of polyacrylic acid as an improved crosslinking agent compared to traditional polycarboxylic acid crosslinking agents that leave the product crosslinked fibers lacking brightness. The problem of lack of brightness of traditional polycarboxylic acid crosslinked fibers is solved by Herron by using polyacrylic acid as a crosslinking agent. The reference does not solve the problem by post-crosslinking bleaching.

Second, for a fair and complete understanding of the sentence cited by the Examiner noted above, the sentence must be considered in its context. The sentence is within a paragraph (Column 12, line 40 through Column 13, line 22) that addresses the relationship between the level of crosslinking and fluid (FRV) or water (WRV) retention values for crosslinked fibers. As the level of crosslinking increases for a fiber, FRV decreases (Column 12, lines 60-62). The WRVs of fibers crosslinked in accordance with the Herron process have WRVs less than about 60, greater than about 25, preferably less than about 50, and more preferably between about 30 and 45 (Column 13, lines 5-10). Bleached SSK fibers crosslinked with polyacrylic acid have WRVs from about 25 to about 50 (Column 13, lines 10-14). Southern softwood Kraft (SSK) fibers having levels of crosslinking greater than those described in the reference have WRVs less than about 25 and have been observed to be exceedingly stiff and exhibit lower absorbent capacities compared to the fibers described in the reference (Column 13, lines 16-22). The above-noted sentence is sandwiched in this paragraph immediately before the deficiencies of the highly crosslinked, exceedingly stiff, and low absorbent capacity fibers are described. Applicants submit that the fair reading of the sentence in full context leads one skilled in the art to conclude that the practice of post-crosslinking bleaching steps have been found to adversely affect WRV. Accordingly, applicants submit that, fairly read, the cited sentence indicates that the practice of post-crosslinking bleaching steps adversely affects WRV, the reference teaches

LAW OFFICES OF
CHRISTENSEN O'CONNOR JOHNSON KINDNESS PLLC
1420 Fifth Avenue
Suite 2800
Seattle, Washington 98101
206.682.8100

away from post-crosslinking bleaching of polyacrylic acid crosslinked fibers and does not provide any motivation to bleach polyacrylic acid crosslinked fibers.

Applicants submit that such a reading is fair and reasonable because, if post-crosslinking bleaching positively affected WRVs, the cited reference, as well as others, would have described the advantages of post-crosslinking bleaching to attain such advantageous WRVs. However, the reference is absolutely silent with regard to any positive statement associated with post-crosslinking bleaching and does not include any example describing polyacrylic acid fibers were bleached for any purpose, either to enhance WRVs or to increase brightness.

Taken in context with the full consideration of the teaching of the paragraph containing the sentence and the teaching of the reference as a whole, applicants submit that the reference fairly teaches and suggests that post-crosslinking bleaching adversely affects the WRV of crosslinked fibers. Accordingly, because the cited reference teaches away from post-crosslinking bleaching, the reference cannot and does not provide motivation to one of skill in the art to bleach polyacrylic acid crosslinked fibers.

For the above reasons, applicants respectfully submit that the Herron reference fails to teach, suggest, or provide any motivation to make bleached polyacrylic acid crosslinked fibers or absorbent products that include the fibers. Because the claimed invention is nonobvious and patentable over the cited reference, withdrawal of the rejection is respectfully requested.

The Rejection of Claims 1 and 3-13 Under 35 U.S.C. § 103(a)

Claims 1 and 3-13 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,562,740, issued to Cook et al., in view of U.S. Patent No. 5,549,791, issued to Herron et al. Withdrawal of the rejection is requested for the following reasons.

Claims 1, 5, and 10 are the pending independent claims. Claims 1 and 10 are directed to bleached polyacrylic acid crosslinked fibers and absorbent products that include the fibers,

LAW OFFICES OF
CHRISTENSEN O'CONNOR JOHNSON KINDNESS PLLC
1420 Fifth Avenue
Suite 2800
Seattle, Washington 98101
206.682.8100

respectively. Claims 3 and 4 depend from Claim 1, and Claims 11-13 depend from Claim 10. Claim 5 is directed to a method for making bleached polyacrylic acid crosslinked fibers that includes spraying a bleaching agent into an air stream containing polyacrylic acid crosslinked fibers. Claims 6-9 depend from Claim 5.

The Cook reference solves the problem of odor and brightness for certain crosslinked cellulosic fibers by treating those crosslinked fibers with alkaline hydrogen peroxide. The reference relates not at all to polyacrylic acid crosslinked fibers and only addresses the well-known odor and brightness problems associated with citric acid crosslinked fibers specifically (and, perhaps, alpha hydroxy C_2-C_9 polycarboxylic acid crosslinked fibers generally). The reference does not contemplate treatment of polyacrylic acid crosslinked fibers. The reference does not teach or suggest that polyacrylic acid crosslinked fibers would benefit from such a treatment. In fact, as evidenced by the Herron reference, polyacrylic acid fibers do not suffer from lack of brightness associated with citric acid crosslinked fibers.

As noted above, the Herron reference teaches away from bleaching polyacrylic acid crosslinked fibers and, by doing so, fails to suggest or provide any motivation to bleach polyacrylic acid crosslinked fibers.

Because the cited references, either alone or in combination, fail to teach, suggest, provide any motivation to make, or otherwise render obvious the claimed invention (bleached polyacrylic acid crosslinked fibers, absorbent products that include the fibers, or methods for making the fibers), the claimed invention is nonobvious and patentable over the cited references. Withdrawal of the rejection is respectfully requested.

LAW OFFICES OF
CHRISTENSEN O'CONNOR JOHNSON KINDNESS PLLC
1420 Fifth Avenue
Suite 2800
Seattle, Washington 98101
206.682.8100

CONCLUSION

In view of the foregoing remarks, applicants believe that Claims 1 and 3-13 are in condition for allowance. If any issues remain that may be expeditiously addressed in a telephone interview, the Examiner is encouraged to telephone applicants' attorney at 206.695.1755.

Respectfully submitted,

CHRISTENSEN O'CONNOR
JOHNSON KINDNESS^{PLLC}

George E. Renzoni, Ph.D.
Registration No. 37,919
Direct Dial No. 206.695.1755

GER:md

LAW OFFICES OF
CHRISTENSEN O'CONNOR JOHNSON KINDNESS^{PLLC}
1420 Fifth Avenue
Suite 2800
Seattle, Washington 98101
206.682.8100